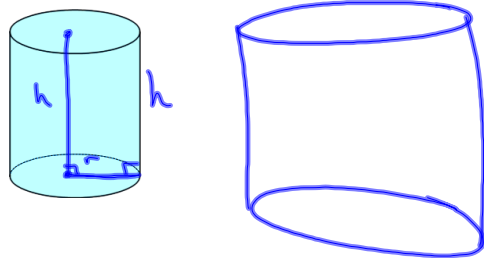


## 9-2 and 9-4 Surface Area and Volume of Cylinders



Perimeter of Circle = Circumference  $\pi \cdot d$

Lateral Area

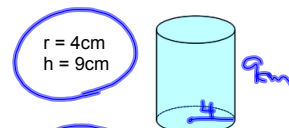
$$LA = p \times h$$

Surface Area

$$SA = LA + 2B$$

$$Volume = B \times h$$

$B$  - area of  
base  
 $\pi r^2$



$$p = \pi d = 8\pi \quad 25.1 \text{ cm}$$

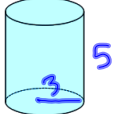
$$B = \pi r^2 = 16\pi \quad 50.3 \text{ cm}^2$$

$$LA = ph = 8\pi \cdot 9 = 72\pi \quad 226.2 \text{ cm}^2$$

$$SA = LA + 2B = 72\pi + 2(16\pi) = 104\pi \quad 326.7 \text{ cm}^2$$

$$V = Bh = 16\pi \cdot 9 = 144\pi \quad 452.4 \text{ cm}^3$$

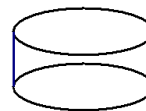
$r = 3\text{cm}$   
 $h = 5\text{cm}$



$p = \pi d = 6\pi \quad 18.8\text{cm}$   
 $B = \pi r^2 = 9\pi \quad 28.3\text{cm}^2$   
 $LA = ph = 6\pi \cdot 5 = 30\pi \quad 94.2\text{cm}^2$   
 $SA = LA + 2B = 30\pi + 2(9\pi) = 48\pi \quad 150.8\text{cm}^2$   
 $V = Bh = 9\pi \cdot 5 = 45\pi \quad 141.4\text{cm}^3$

Do:

$r = 10\text{cm}$   
 $h = 2\text{cm}$



$$p =$$

$$B =$$

$$LA =$$

$$SA =$$

$$V =$$

Assignment:

p487-488

11-13, 24-26(Find p, B, LA, and SA)

p505-506

27-33, 39, 40